REMARKS

Claims 1-3 and 10-21 are pending in this application. All of the pending claims were rejected. Claim 20 is currently amended.

This Preliminary Amendment is being filed for the purpose of putting the claims in proper condition for appeal. The Examiner previously indicated that claim 20 should be amended to correct an antecedent basis problem. Applicant would also like the language of claim 20 to correspond to that of the other independent claims in order to facilitate the appeal process. Applicant attempted to amend claim 20 in a previously submitted Petition to Revive. However, the Petitions Attorney indicated that the Advisory Action of July 11, 2006 addressed the proposed amendment. Applicant requests reconsideration. The Examiner indicated by telephone in July 0f 2006 that the Supplemental Response After Final dated July 11, 2006 would be entered in order to place the claims in condition for appeal. However, in the Advisory Action of April 24, 2007, the Examiner subsequently refused entry of that Supplemental Response After Final. The Office cannot reasonably maintain that this amendment is inappropriate based on the Supplemental Response After Final being lacking where that response was refused entry and never considered in detail. Applicant and the Examiner have been unable to find agreement on allowable claim language. Applicant respectfully requests that this Preliminary Amendment now be entered so that the application can proceed to appeal in a fair and orderly manner.

For completeness, the issues remaining in the application are as follows. Independent claims 1, 13 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of Tshushima, Eggleton and Fukashiro. Basically, the logic of the rejections is that

bulk dispersion compensation was known[1], channel mux and demux were known,[2] and individual amplitude compensation was known[3], and those things combined yield the claimed invention. The Office asserts that the motivation to combine these techniques is found in the advantages.[4] However, Applicant is unable to find any teaching of those advantages in the cited references, and the Office does not cite any sections of the references as teaching those advantages. A *prima facie* case of obviousness under 35 U.S.C. 103 must include a showing of a suggestion, teaching or motivation that would have led a person of ordinary skill in the art to combine the cited references *in the particular manner claimed*. See In re Dembiczak, 175 F.3d 994, 998 (Fed. Cir. 1999), and In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Further, a teaching or suggestion of a reasonable expectation of success must be found in the prior art, and not based on Applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). In this case, the Office has neither established that a person of ordinary skill in the art would be motivated to combine the cited references in the claimed manner, nor that there was any reasonable expectation of success. Further, Applicant suggests that the Office cannot possibly do so because there is no such teaching in the cited references.

There is generally no pressing need for an all-optical gateway in a single vendor network because settings such as amplitude can be standardized by, and controlled by, a single vendor. As discussed in the Background of this application, the generally accepted equipment for multi-vendor interworking in hub and POP sites is an optical-to-electrical-to-optical node. In other words, the specific "problem" solved by the presently claimed invention was not even recognized

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[1] See Eggleton.
[2] See Tshushima.
[3] See Fukashiro.
[4] OA dated 03/31/2006 at page 9.

as being a problem in the industry. Turning again to the assertion by the Office that the motivation to combine the references in the claimed manner can be found in the advantages, that assertion cannot be true if the industry failed to even recognize the problem. In other words, the "advantages" would not be seen as advantageous because they would not be recognized as solving any problem. Even today the telecommunications industry is not clamoring for an all-optical node capable of bulk dispersion compensation and individual amplitude compensation for multi-vendor interworking in hub and POP sites. The Office's assertion that the motivation to combine the references in the claimed manner can be found in the advantages is therefore unsupportable.

Even assuming there was motivation to combine the cited references, Fukashiro fails to suggest individual amplitude compensation in the claimed manner. Fukashiro teaches amplitude compensation between stages of the switch fabric[5]. Certain all-optical switch components, such as MEMs, that are used to create switch fabrics are notorious for having relatively large insertion loss. It seems reasonable to assume that the Fukashiro amplitude compensation is used for that purpose since it is located between stages of the switch fabric. In contrast with Fukashiro, the amplitude compensation is disposed after the switch fabric, and used for a different purpose, i.e., to match output carrier amplitude rather than compensate for insertion loss. Therefore, the presently claimed invention distinguishes the cited combination for at least two distinct reasons: (1) because the amplitude compensation is **at a different stage**, and (2) because the amplitude compensation is **for a different purpose**. In terms of the claim language, claim 1 distinguishes the cited combination by reciting "photonic switch fabric for forwarding an optical signal comprising a plurality of channels … means for monitoring the optical signal before and **after**

the photonic switch fabric; means for dynamically, adjustably compensating for individual channel amplitude impairment **responsive to the monitoring means**, based at least in part **on output carrier power**." (emphasis added) Since the Fukashiro amplitude compensation is not based on output carrier, and amplitude compensation based on something other than output carrier would fail to accommodate downstream network equipment at a different power level, Fukashiro fails to meet the claimed limitations. Similarly, claim 13 distinguishes the cited combination by reciting "means for performing dynamically adjustable amplitude impairment compensation on each one of the plurality of channels of the optical signal **responsive to the performance monitoring** of each channel coupled thereto, **and based at least in part on output carrier power**," (emphasis added) and claim 20 distinguishes the cited combination by reciting "at least one optical compensation element operative to dynamically control amplitude of a single one of the plurality of wavelengths **based at least in-part on amplitude of an output carrier associated with the single wavelength**." (emphasis added) The Office previously cited Patterson for teaching control based on channel power feedback, however Patterson teaches control of **dispersion compensation** rather than **amplitude** based on channel power feedback.

The Office is encouraged to contact Holmes W. Anderson to discuss any matters which would expedite allowance of this application.

December 20, 2007
Date

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